

Final Report (FR) Outline



I. Overview

- A. Purpose and Scope [guidelines, example]
- B. Coalition / Joint / Interagency Operational Problem [guidelines, example]
- C. Desired Capabilities [guidelines, example]
- D. Capabilities Solution [guidelines, example]
- E. Top Level CONEMP or CONOP [guidelines, example]
- F. Operational View-1 (OV-1) [guidelines, example]
- G. Organizational Structure / Roles and Responsibilities [guidelines, example]

II. Accomplishments and Lessons Learned

- A. Capabilities Impact on Coalition / Joint / Interagency Operational Problem [guidelines, example]
- B. Demonstration Accomplishments [guidelines, example]
- C. Extended Use Accomplishments [if conducted] [guidelines, example]
- D. Transition Accomplishments / Projection [guidelines, example]
- E. Lessons Learned [guidelines, example]
- III. Summary, Conclusions and Recommendations [guidelines, examp
- IV. Acronyms and Terms [guidelines, example]
- V. Glossary [guidelines, example]
- VI. Appendix [quidelines, example]
 - A. Detailed Lessons Learned
 - B. JCTD Documentation (ID, MP, TP, IAP, OUA Report, Technical Specifications, CONOP / TTP, DOTMLPF Recommendations, etc...)

Narrative Text Figures & Illustrations





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- Section Sub-Title: A. Purpose and Scope
- Guidelines:
 - Content: Describe the intent and framework of the Final Report
 - Format:

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Section Type	Narr	ative
Section Length	1 Paragraph	



Example: I. Overview A. Purpose



- The Final Report serves as the final reporting package for the JCTD. It was drafted and assembled by the Transition Manager in coordination with the balance of the JCTD integrated management team.
- The report provides an overview of the JCTD, including Coalition / Joint / Interagency Operational Problem, Desired Capabilities, Capabilities Solution, Top Level CONEMP / CONOP and Operational View-1 (OV-1) that drove the Formulation through the Demonstration and the Assessment through the Transition phases.
- Accomplishments and Lessons Learned, including Capabilities Impact on Problem, Demonstration Accomplishments, Extended Use Accomplishments, Transition Accomplishments / Projections and Lessons Learned, provide top level information for the primary execution areas of the JCTD.
- The report provides a close-out section, including Summary, Conclusions and Recommendations.
- The core Final Report is accompanied by the key JCTD documents, including Detailed Lessons Learned, Implementation Directive, Management and Transition Plan, Integrated Assessment Plan, Operational Utility Assessment Report, Functional Requirements, Technical Specifications, CONOP and TTP and DOTMLPF Recommendations.
- The JCTD Final Report package will be distributed to DUSD(AS&C), defense agencies, COCOMs and Services and presented to the JFCA FCBs through JROC, as appropriate for this JCTD.





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 Section Sub-Title: B. Coalition / Joint / Interagency Operational Problem

- Guidelines:
 - Content: Describe operational deficiency(s) that limits or prevents acceptable performance / mission success
 - Format:

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Section Type	Bullet List	Narrative
Section Length	1 Slide	½ Page



Example: I. Overview B. Coalition / Joint / Interagency Operational Problem



Unable to identify, prioritize, characterize and share global maritime threats in a timely manner throughout multiple levels of security and between interagency partners.

- Insufficient ability to achieve and maintain maritime domain <u>awareness</u> (<u>intelligence</u>, <u>people</u>, <u>cargo</u>, <u>vessel</u> [<u>cooperative</u> and <u>uncooperative</u>]) on <u>a global basis</u> (to include commercially navigable waterways)
- Insufficient ability to <u>automatically</u> generate, update and rapidly disseminate high-quality ship tracks and respective metadata (people, cargo, vessel) that are necessary to determine threat detection at the SCI level on a 24/7 basis on SCI networks
- Insufficient ability to <u>aggregate</u> maritime data (tracks) from <u>multiple</u> intelligence sources at <u>multiple levels of security</u> to determine ship movement, past history and current location
- Inability to automatically ingest, fuse and report "SuperTracks" (tracks
 + cargo + people + metadata [associated data]) to warfighters and
 analysts at the SCI level
- Inability to generate and display automated <u>rule-based</u> maritime <u>alert</u> <u>notifications</u> based on a variety of predetermined anomalous activity indicators established from SCI Intelligence Community channels







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- Section Sub-Title: C. Desired Capability(ies)
- Guidelines:
 - Content: Describe capabilities and tasks to be assessed throughout the JCTD (month/year) that will resolve the operational problem:
 - Describe in terms of desired outcomes
 - Descriptions should contain required characteristics (attributes) with appropriate parameters and metrics (e.g., timely, relevant, accurate, etc.) to be overcome and supported

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Section Type	Bullet List	Narrative
Section Length	1 Slide	½ Page



Example: I. Overview C. Desired Capability(ies)



- Global, persistent, 24/7/365, pre-sail through arrival, maritime cooperative and non-cooperative vessel tracking awareness information (people, vessel, cargo) that flows between and is disseminated to appropriate intelligence analysts / joint warfighters / senior decision makers / interagency offices within the SCI community, with the following data manipulation capabilities:
 - Identify, query and filter vessels of interest automatically based on user-defined criteria
 - Ensure reported track updates of the most recent location are based on the refresh rate of the source
 - Conduct advanced gueries that can inference across multiple data sources at the SCI level
 - Ability to access and disseminate appropriate data to and from SCI, Secret and unclassified networks. (Secret and SBU dissemination done through other channels)
 - Display and overlay multiple geospatial data sources (e.g. mapping data, port imagery, tracks, networks of illicit behavior monitored by IC or LEA channels)
- Automated, rule-based maritime-related activity (people, vessel, cargo) detection alerting and associated information at the SCI level (with new sources not available at lower security levels) to appropriate analysts, warfighters, senior decision makers and interagency personnel/offices:
 - Generate and send alerts based on user-defined criteria
 - Define patterns of normal behavior based on understanding of global supply chains
 - Define alerting criteria based on models of abnormal behavior (e.g., loitering off a high-interest area)
- User-Defined Awareness Picture (UDAP)
 - Tailorable for each unit (user-defined parameters/filters)
- SCI Subscription Service
- Interoperable with currently existing data sources and systems
- CONOP and TTP compatible with developing greater MDA CONOP and TTP







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- Section Sub-Title: D. Capabilities Solution
- Guidelines:
 - Content:
 - Identify:
 - Key elements and components (e.g., sensors and processors, communications, systems, etc.)
 - Operational organizational components (e.g., local sites, national control centers, regional coordination centers, etc.)
 - Operational interoperability (e.g., external users (e.g., COCOMs, Services, DHS), international partners)
 - Define:
 - Operational and technical functionality / capabilities
 - Information and technologies usage and sharing (e.g., exportability, classification, etc.)

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Section Type	Bullet List	Narrative
Section Length	1 Slide	½ Page



Example: I. OverviewD. Capabilities Solution



- Combined hardware and software system consisting of the following:
 - Multi-INT Sensor Data and Databases [People, Vessel, Cargo, Infrastructure, 24/7, global basis]
 - Provides capability for data integration from multiple information sources [U.S. Navy, SEAWATCH, JMIE, Internet]
 - Enables access to unique SCI source data
 - Multi-INT Fusion Processing Software [auto correlation of SCI level data illicit nominal/abnormal patterns]
 - Multi-INT data associations and linkages
 - Creates MDA multi-INT "SuperTracks"
 - Generates alarms/alerts on multi-INT data
 - <u>Network and Security Services Infrastructure</u> [scalable, equitable, interoperable, tailorable]
 - Leverage and use existing networks
 - Control / ensure appropriate access to/from JWICS, SIPRNET, NIPRNET
 - Publish information within an SCI SOA
 - Provides multilevel security info exchange SBU, Secret, SCI
 - Enables continuous 24/7 information access
 - Maritime Ship Tracks [automated ship activity detection, query/filter VOIs / NOAs]
 - Worldwide track generation service
 - Ship track alarms/alerts
 - Operational SCI User / UDOP [scalable / interoperable dissemination with interactive search for ops and analyst]
 - · Provides enhanced multi-INT information track-related products for operators
 - Enables worldwide MDA SuperTrack coverage and observation
 - · Display product on legacy [GALE] or other equipment
 - Archive / Storage [People, Vessel, Cargo, 24/7, global basis, infrastructure]
 - · Maintain SuperTrack data archive for the life of the JCTD
 - Fused multi-INT knowledge products, short-term working archive
 - External database referencing and interfaces [i.e. mapping data...
 - Alarms and Alert Tools [detection alerting]
 - User definable controls for alarming, alerting and reporting
 - Capability to generate alerts on single anomalies or linked data/knowledge situations
 - CONOP and TTP
 - Standardized User Interface Symbology
 - Leverage CMA and VTP





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- Section Sub-Title: E. Top Level CONEMP or CONOP
- Guidelines:
 - Content:
 - Describe Commander's intent in terms of overall operational picture within an operational area / plan by which a commander maps capabilities to effects, and effects to end state for a specific scenario:
 - Commander's written vision / theory that becomes fusion engine of means, ways and ends
 - Describe an approach to employment and operation of the capability in a joint and coalition environment
 - Not limited to a single system command, Service, or nation but can rely on other systems and organizations, as required

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Section Type	Bullet List	Narrative
Section Length	1 Slide	Page As Needed



Example: I. Overview E. Top Level CONEMP or CONOP



At the top level, the CONOP is based on the implementation of the JCTD among the NMIC and NORTHCOM. The JCTD hardware and software suites within the NMIC establish an improved information-sharing environment (ISE) based on SOA principles at the SCI level. The NMIC maintains the enhanced, integrated, fused maritime SCI information that it produces in a Web-based repository. Maritime analysts are thus able to access this information and perform threat analysis by conducting advanced queries of multiple data sources. Furthermore, the NMIC disseminates the fused data products to analysts at locations such as NORTHCOM at the SCI level. Fused data products are transmitted to lower classification enclaves, as shown in figure 2-2 based on end-user needs and capabilities. The shared, common operating picture (COP) is updated at the NMIC, then shared with mission partners.

When intelligence updates reveal increased threat indicators, NORTHCOM senior leadership directs its J-2 division to obtain detailed information regarding a known deployed threat vessel. The J-2 analysts, now armed with enhanced JCTD capabilities, are able to collaborate with other maritime partners to find and fix the target of interest from the JCTD multisource data, and conduct an assessment of the information. The target of interest and associated information is shared with mission partners with the regular updating of the COP. In turn, J-2 is able to provide NORTHCOM senior leadership with an accurate composite maritime picture inclusive of the threat data, and NORTHCOM in turn notifies partner agencies and support elements to take the appropriate actions.





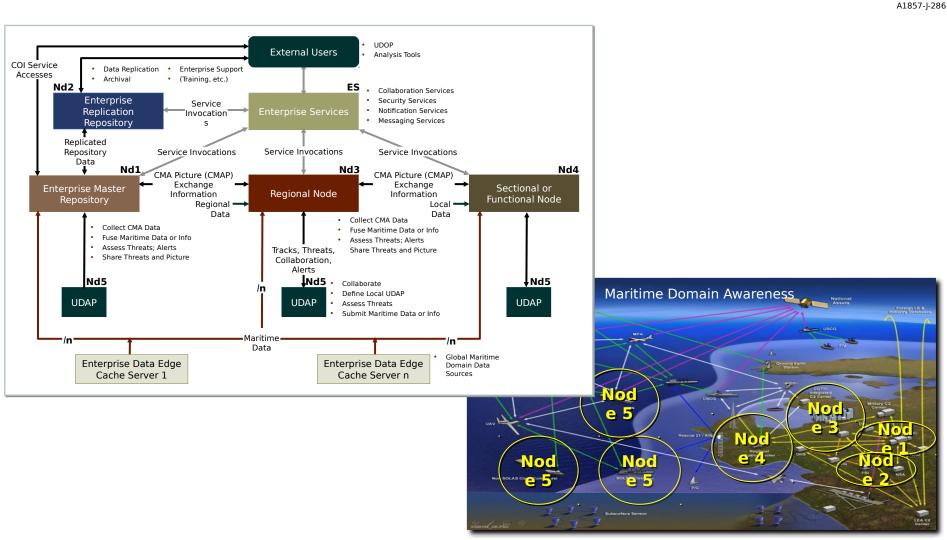
- Section Sub-Title: F. Operational View (OV-1)
- Guidelines:
 - Content: Operational concept graphic top level illustration of JCTD use in operational environment:
 - Identify the operational elements / nodes and information exchanges required to conduct operational intelligence analysis
 - Serves to support development of the SV-1 architecture
 - Format as a high-level structured "cartoon like" picture
 - Illustratively describe the CONOP
 - Supports development of the CONOP and TTP
 - Format:

	PowerPoint	Word
Section Type	Graphic	Graphic
Section Length	1 Slide	1 Page



Example: I. Overview F. Operational View-1 (OV-1)









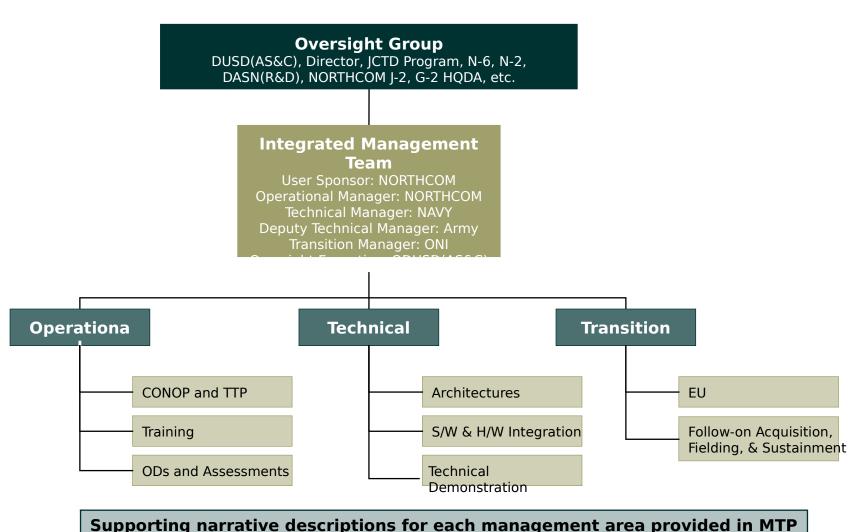
- Section Sub-Title: G. Organizational Structure, Roles and Responsibilities
- Guidelines:
 - Content: Identify management areas and structure including:
 - Oversight Group (OG), Integrated Management Team (IMT), operational, technical, transition, oversight, supporting programs
 - Define top level functions for each management area and working arrangements between management areas
 - Information is illustrated through organization chart and supporting narrative for each management area
 - Format:

	PowerPoint	Word
Section Type	Org Chart	Narrative
Section Length	1 Slide	Page As Needed



Example: I. OverviewG. Organizational Structure, Roles and Responsibilities







Section Title: II. Accomplishments and Lessons Learned



- Section Sub-Title: A. Capabilities Impact on Coalition / Joint / Interagency Operational Problem
- Guidelines:
 - Content: Describe the extent to which the deficiency(s) or need(s) within an intelligence or operational organization were resolved based on the operationally demonstrated and assessed JCTD capabilities solution, CONOP and TTP
 - Format:

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Section Type	Bullet List	Narrative
Section Length	1 Slide	Page As Needed



Accomplishments and Lessons Learned





Problem

Able to identify, prioritize, characterize and share global maritime threats in a timely manner throughout multiple levels of security and between interagency partners.

- Achieved and maintained maritime domain <u>awareness</u> (intelligence, people, <u>cargo</u>, <u>vessel</u> [cooperative and <u>uncooperative</u>]) on a <u>global basis</u>, including commercially navigable waterways and Tier 1 ports
- <u>Automatically</u> generated, updated and rapidly disseminated high-quality ship tracks and respective metadata (people, cargo, vessel) that are necessary to determine threat detection at the SCI level on a 24/7 basis on SCI networks
- Aggregated maritime data (tracks) from multiple intelligence sources at multiple levels of security to determine ship movement, past history and current location
- <u>Automatically ingested, fused and reported</u> SuperTracks (tracks + cargo + people + metadata [associated data]) to warfighters and analysts at the SCI level
- Generated and displayed automated <u>rule-based</u> maritime <u>alert notifications</u> based on predetermined anomalous activity indicators established from SCI Intelligence Community channels



Section Title: II. Accomplishments and Lessons Learned



- Section Sub-Title: B. Demonstration Accomplishments
- Guidelines:
 - Content: Describe executive summary-level results of the operational demonstrations and assessments:
 - Use extracts from Interim and Final Operational Utility Assessment Reports
 - Discuss in the context of the resolution of the Coalition / Joint / Interagency Operational Problem and achievement of the Desired Capabilities, Capabilities Solution, CONOP and TTP
 - Include identification of venues, participants and demonstration articles
 - Can be synopsis extracted from OUA Report
 - Format:

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Section Type	Bullet List	Narrative
Section Length	1 Slide	Page As Needed



Accomplishments and Lessons Learned



B. Demonstration Results

Operational Demonstration 1 (OD-1) was conducted with analysts from NMIC (USCG ICC and ONI), NORTHCOM JIOC, JFMCC North and NSA. An LJOUA was performed by an independent assessor, the Joint Tactical Action Area (JTAA). OD-1 transitioned a preliminary interim operational capability. Global, persistent, 24/7/365, pre-sail through arrival, maritime cooperative and noncooperative vessel tracking awareness information was collaboratively developed and disseminated to the analysts and senior decision makers. The information include vessels, with cargo and people. Data manipulation include automatic identification, query and filtering of VOIs, automated updating of reported tracks, advanced queries across multiple data sources at the SCI level and access and dissemination of data to and from SCI, Secret and unclassified networks. Additionally, a tailorable UDAP for each participating unit and CONOP and TTP were successfully demonstrated and assessed.

Operational Demonstration 2 (OD-2) was conducted with analysts from NMIC (USCG ICC and ONI), NORTHCOM JIOC, JFMCC North and NSA. It captured the final JOUA again through the JTAA. It was a standalone demonstration and enhanced the previously transitioned interim capability. In addition to OD-1 capabilities, enhanced data manipulation was displayed and overlaid with multiple geospatial data sources, allowing the use of mapping data, pot imagery, tracks and networks of illicit behavior monitored by IC channels. Normal behavior patters based on the understanding of global supply chains were demonstrated, as well as the capability to define alerting criteria based on models of abnormal behavior.



Section Title: II. Accomplishments and Lessons Learned



- Section Sub-Title: C. Extended Use Accomplishments (if conducted)
- Guidelines:
 - Content: Describe executive summary level results of the Extended Use (EU) of the Interim Capability:
 - Capture feedback from operational users
 - Discuss in the context of the Desired Capabilities, Capabilities Solution, CONOP and TTP employed during the EU
 - Include identification of venues, participants and Interim Capability articles
 - Format:

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Section Type	Bullet List	Narrative
Section Length	1 Slide	Page As Needed



Example: II. Accomplishments and Lessons Learned



C. Extended Use Accomplishments [if conducted]

Extended Use of an Interim Capability was conducted with analysts from NMIC (USCG ICC and ONI), NORTHCOM JIOC, JFMCC North and NSA from January through September, FY09. Global, persistent, 24/7/365, pre-sail through arrival, maritime cooperative and noncooperative vessel tracking awareness information was collaboratively developed and disseminated among 25 analysts and four senior decision makers in support of eight operational missions in the NORTHCOM, EUCOM and PACOM AOR. The information included 310 vessels with cargo and 43 people of interest. Data manipulation included automatic identification, query and filtering of VOIs, automated of reported tracks, advanced queries across multiple data sources at the SCI level and access to and dissemination of data to and from SCI, Secret and unclassified networks. User qualitative feedback was captured on a monthly basis and provided as part of the JCTD information package.

During this period CONOP, TTP and DOTMLPF were finalized, along with supporting technical information. This JCTD information package was transitioned and delivered to the COCOMs, Navy Combat Development Center and MDA Program of Record.



Section Title: II. Accomplishments and Lessons Learned



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- Section Sub-Title: D. Transition Accomplishments / Projections
- Guidelines:
 - Content: Describe executive summary-level information on the transition of JCTD products to POR / programs / operational use:
 - Identify specific products transitioned to each POR / program / operational use based on Transition Detail Sheets
 - Identify the status of transition (e.g., Follow-on Development underway through PM SDD program, capability being deployed to 66thMI Brigade, no transition initiated to date, transition to DCGS-A planned for 4th quarter, FY09, etc.)

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Section Type	Bullet List	Narrative
Section Length	1 Slide	Page As Needed



Example: II. Accomplishments and Lessons Learned



D. Transition Accomplishments / Projections

JCTD software package, including data base interfaces, UDAP and integration modules and information package, including CONOP, TTP, Technical Specification, Training Plan, DOTMLPF and Operational Utility Assessment (OUA) Reports transitioned to MDA Program of Record, all COCOMs and Navy Combat Development Center, 1st quarter, FY10. A detailed listing and definition of the above products is provided in the attached information package appendix.

The follow-on development effort by PM MDA POR, including operational test and evaluation and certification and accreditation, is underway and planned for completion in the 4th quarter, FY10. Full-scale deployment to all COCOMs and naval components, NMIC, USCG and MOCs will commence in the 1st quarter, FY11 and is planned for completion in the 3rd quarter, FY12. Updates to DOTLP and policy information by the Navy and USCG Combat Development Centers and JFCOM are underway and planned for completion by the end of FY10.

Interim capability provided during FY09 JCTD extended use is transitioned and operationally accepted by NMIC (USCG CC and ONI), NORTHCOM JIOC, EUCOM, PACOM, JFMCC North, MOCs and NSA organizations. Analysts continue operational use of capability as part of day-to-day MDA missions.

Software and information package upgrades and follow-on deployment of capability by the PM MDA will be performed on an annual basis and / or as needed to all USG MDA sites, according to the National MDA CONOP and Plan



Section Title: II. Accomplishments and Lessons Learned



- Section Sub-Title: E. Lessons Learned
- Guidelines:
 - Content: Describe executive summary level information on lessons learned throughout the 10-step JCTD life cycle (e.g., formulation through Final Reporting):
 - Address operational, technical, transition, programmatic, financial, and oversight management areas, as applicable
 - Describe both positive and negative lessons, as applicable
 - Format:

	PowerPoint	Word
Section Type	Bullet List	Narrative
Section Length	1 Slide	Page As Needed



Example: II. Accomplishments and Lessons Learned



E. Lessons Learned

Planning:

- Document the agreements among participants in Memoranda of Agreement
- A longer lead time would allow better preparation and coordination among all participants
- A single point of contact at the platform agency would eliminate confusion that resulted from conducting the demonstration with different personnel than were involved in the planning.
- Ensure that contractual agreements with sensor system vendors are completed early enough to allow understanding of system technical capabilities
- Perform predemonstration technical analysis of sensor system capabilities against potential target signals including propagation and signal processing. This could potentially reduce the required number of demonstration trials.

Administration:

- Ensure that foreign-country security clearance procedures are documented
- Ensure that secure facility certification meets U.S. standards

Operations:

- Demonstration operations should be conducted from a single location rather than split between two or more locations
- Use trained data collectors rather than expecting equipment operators to also collect data

Assessment:

- Ensure that procedures are set up to expedite returning classified data from overseas

Logistics:

- Define what needs to get accomplished on each site survey and prepare a checklist to ensure that each item gets addressed
- Bring secure telephone instruments for each location rather than relying on a host-nation system





Section Title: III. Summary / Conclusions and Recommendations



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Guidelines:

- Content: Provide executive level-summary, conclusions and recommendations
 - Provide overarching narrative on the characterization of the JCTD
 - Reaffirm whether or not and to what extent operational utility was achieved
 - Include whether or not and to what extent the desired capabilities resolved the Joint / Coalition / Interagency Operational Problem
 - Highlight the transition status and lessons learned
 - Identify and define recommendations for any outstanding issues

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Section Type	Bullet List	Narrative
Section Length	1 Slide	Page As Needed



Example: III. Summary / Conclusions and Recommendations



- An integrated JCTD capability involving multiple BFT device types, architectures, and COP display types was successfully demonstrated during FE04. This success was the result of extensive coordination between the JCTD staff and USFK, the support of leadership and units throughout Korea and an extensive technical effort.
- Users at all levels agreed, and Det 1 AFOTEC assessed that, the JCTD capability provided a significant enhancement to SA. USFK leadership is vigorously pushing for a full employment of that capability within the theater. The following are top level warfighter comments:
 - Warfighters desire a more rapid update for aircraft tracks.
 - Warfighters are generally satisfied with usability and display of BFT information.
 - A number of DOTMLPF insights were gained at theater and unit level.
- Based on FE04 assessment results, observations and lessons learned, the Det 1 AFOTEC assessment team recommends the following:
 - All organizations upgrading to JCTD capabilities should update their COP manager and user training to fully realize the potential increases in SA capabilities.
 - The Transition Manager should explore ways to make the JCTD architecture simpler and / or more robust to increase reliability and decrease the "multiple single points of failure" problem.
 - All organizations down to the unit level need to update CONOP and TTP.
 - The OM / XM should conduct a resource assessment of the following items:
 - Use of JBFSA capabilities in Air Force CPs and platforms
 - Operational impacts in venues with fratricide and coordination-of-fires scenarios
- DOTMLPF effects resulting from the introduction and expansion of JBFSA capabilities, particularly organization, materiel, and personnel impacts, should be aggressively assessed at all levels, from unit to theater.



Section Title: IV. Acronyms and Terms



A1857-J-294

Guidelines:

- Content: Identify acronyms and spells out terms

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Section Type	Bullet List	
Section Length	Line Entries As Needed	



Example: IV. Acronyms and Terms



- DISA: Defense Information Systems Agency
- DoDI 5000.2: DoD Instruction 5000.2
- CJCSI 3170.01: Chairman, Joint Chiefs of Staff, CJCSM 3170.01



Section Title: V. Glossary



A1857-J-0

Guidelines:

- Content: Include key terminology and brief definitions, as appropriate

	PowerPoint	Word
Section Type	Bullet List	
Section Length	Line Entries As Needed	



Example: V. Glossary



- Data: A representation of individual facts, concepts or instructions in a manner suitable for communication, interpretation or processing by humans or by automatic means. (IEEE 610.12)
- Information: The refinement of data through known conventions and context for purposes of imparting knowledge.
- Operational Node: A node that performs a role or mission.
 (DoDAF)



Section Title: VI. Documentation



A1857-J-296

Guidelines:

- Content: Provide copies and assemble package of all relevant JCTD documentation
 - Include ID, MTP, IAP, OUA Report, technical specifications, CONOP and TTP, DOTMLPF recommendations, detailed lessons learned, etc.)
 - Identify title and date of each

	PowerPoint	Word
Section Type	Bullet List	Documents
Section Length	Line Entries As Needed	Documents



Example: VI. Documentation



- JCTD Management and Transition Plan, May 2008
- JCTD CONOP and TTP, April 2009
- JCTD Integrated Assessment Plan, April 2007
- JCTD Operational Utility Assessment, May 2008
- DISA, 2002: Defense Information Systems Agency, Joint Technical Architecture, Version 4.0, July 17, 2002.
- JCTD Capabilities Solutions Technical Specification
- Etc.